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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/906,996	07/17/2001	Yoshiharu Hashimoto	NECQ 18.853	6472

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EXAMINER

ZAMANI, ALI A

ART UNIT PAPER NUMBER

2674

DATE MAILED: 01/22/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/906,996

Applicant(s)

HASHIMOTO YOSHIHARU

Examiner

Ali A. Zamani

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>3</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura et al. (US pat. No. 6,518,962) in view of Takahashi et al. (US Pat. No. 6,005,541).

In regard to claim 1 and 6, Kimura discloses an active-matrix type display device comprising: light emitting devices (col.2, lines 64-66); scanning lines; transistors; switches (see Fig. 1). Kimura also discloses a reverse bias voltage (see Fig. 20) wherein one end of each of light emitting devices is connected to a source (or a drain) of a corresponding transistor and said drain (or said source) of said transistor is connected to an output terminal of said variable bias voltage generating circuit and a gate of said transistor is connected to a corresponding data line through a corresponding switch; and wherein said switch is brought into conduction (col. 8, lines 21-35) by activating a corresponding scanning line and an image signal is fed through said data line and said switch to said gate of said transistor and said variable bias voltage generating circuit controls said variable bias voltage so that a current flowing through said each light emitting device in response to control information becomes a specified value (col. 3, lines (col. 3, lines 55-65)).

Kimura does not disclose a "bias voltage generating circuit" used to generate a variable bias voltage. However, Takahashi discloses a bias voltage generating circuit (3), which is connected to a plurality of discharge transistors (see Fig. 9).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize the bias voltage generating circuit (3) of Takahashi in the display of Kimura to provide a display device which is capable of reducing a wire resistance in bias voltage lines to thereby reduce power consumption in the bias voltage line.

In regard to claims 2-3 and 8-9, Kimura discloses an active-matrix type display device, wherein a capacitor is connected between gate of transistor and drain of a transistor not being connected to light emitting device (EL) (see Fig.1).

In regard to claims 4-5 and 10, it is well known in the active matrix display (EL), as the number of pixels is increased, a data line would have a longer wire length, and hence, have a greater wire resistance. A voltage drop would occur in a data line because of an increase in a wire resistance thereof and further because of a much current running through a data line (Fig. 12, col. 28, lines 52-60).

As to claim 7, those skill in the art knows in the active matrix type (EL) display device, red, green and blue lights may be mixed to one another to thereby a white light, and pixels associated with red, green and blue may be fabricated through the use of color filters like a liquid crystal display device, in addition, it would be possible to optimally compensate for color balance by controlling a bias voltage to thereby control a current running through a light emitting device, even if a light emission efficiency of the light-emitting device is lowered with an increase

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in a total period of time during which the light-emitting device emits a light, and resultantly, the light-emitting device is degraded.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ali Zamani whose telephone number is (703) 308-6414. The examiner can normally be reached on Monday through Friday from 8:00 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard A. Hjerpe, can be reached on (703) 305-4709.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, DC 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Ali Zamani

January 08, 2004



COMMUNICATIONS SECTION
JAN 14 2004